MIDLAND®

MANUALE ISTRUZIONI - USER'S MANUAL
MANUEL D'UTILISATION - MANUAL DEL USUARIO

ALAN 48 EXCEL

INDEX

Introduction 2
Function and location of the controls 3
Installation 7
Power supply 7
Installing an antenna 7
How to use your ALAN 48 EXCEL MULTI 8
Frequency band selection 8
Frequency band chart 8
Specifications 9

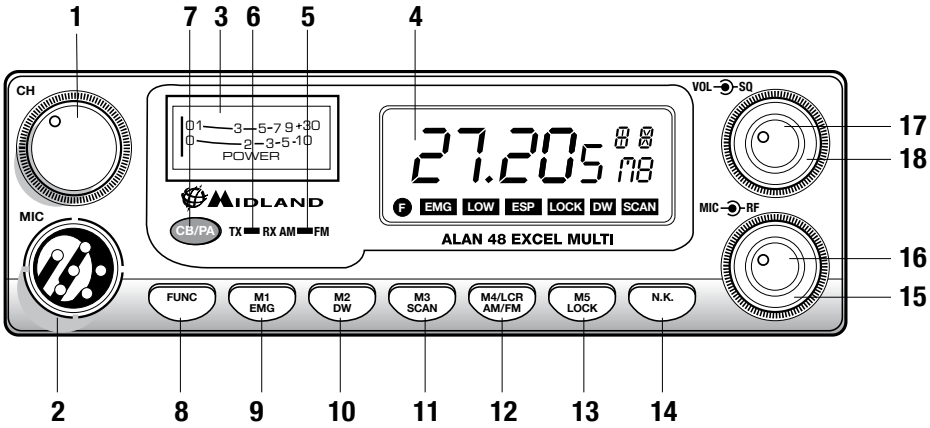
Important Note
Following national regulations have been modified:
Residents of Belgium, Great Britain, Spain and Switzerland need a CB licence in their countries, while visitors may use their CB radios in FM free of licence, for AM they should be able to present their home-country's licence document. In Italy, even visitors need a valid Italian authorization.
Austria does not accept any multi-standard or programmable CB radio. Please respect this requirement and do not use Your radio during driving through Austria.
In Germany transmitting as a base station on channels 41-80 is restricted in some areas along the country borders. No restrictions apply for mobile use. More details can be obtained from the local RegTP authority office.
Changes in European or national regulations will be published on the service website of ALAN-Albrecht under www.alan-albrecht.info

ALAN 48 EXCEL MULTI is a mobile transceiver whose main feature is the possibility to select any of the European CB bands with an easy and quick operation. ALAN 48 EXCEL MULTI is equipped with the “ESP2” (noise reducer device) that reduces considerably the audio noises up to 95%, allowing a clear communication even when the signal is disturbed.
The wide multifunctional backlit display shows the number of the channel in use or the correspondent frequency even in conditions of deep darkness. ALAN 48 EXCEL MULTI is also equipped with an analogical S-Meter, showing the transmitted power and the signal received, and with the exclusive internal voltage reducer allowing the use with 12V or 24V power supply.

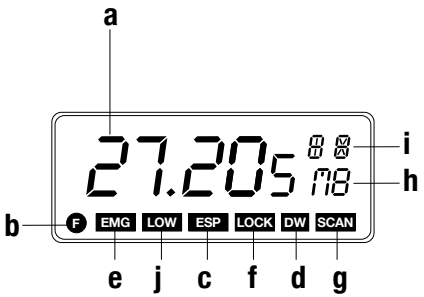
The unit is preset at the factory on the “EC“band , CEPT 40CH FM 4W.

FUNCTION AND LOCATION OF THE CONTROLS

FRONT PANEL



1. **Channel selector:** it permits the manual channel selection.
2. **Microphone jack:** insert the mic connector into this jack.
3. **Indicator:** this meter indicates the receiving signal strength and the transmitter RF output power.
4. **Multifunction backlighted display.**



It shows:

a. channel selected number (from 1 up 40) or operative frequency
b. **FUNC** button activated
c. **ESP**: reducing noise device activated
d. **DW**: Dual Watch function activated
e. **EMG**: indicates channel being used or when the emergency channels are activated
f. **LOCK**: keyboard lock function activated
g. **SCAN** function activated
h. **M1-M2-M3-M4-M5:** memory channel indicator
i. Indicates the frequency band selected.
j. It appears when the radio transmits in low power (this condition happens only in certain frequency bands – see the chart at the end of this manual).

5. **“AM/FM” Indicator**
   It indicates the operative mode. FM: red LED; AM: green LED.
6. **“RX/TX” Indicator**
   LED indicating receiving or trasmitting mode. RX: green LED; TX: red LED.
7. **“CB/PA” Selector**
   In the “CB” position, the unit operates as a transceiver. You can use the PA (public address) function only if you connect a speaker to the PA jack (“PA” visualized on the display). In this case the “MIC” knob controls the amplification level.
8. **FUNC button**
   With the SCAN button, you can:

- visualize the operative frequency (if you keep pressing the button for 3 seconds approx.), or the channel in use;
- activate the second functions of the “M” (M1/M5) buttons.
  M1 / M2 / M3 / M4 / M5:
  ALAN 48 EXCEL has the possibility to store and to recall, when necessary, 5 channels previously memorized.
  To memorize one channel, follow the procedure herebelow:
  A) Select the channel with the appropriate selector or the “UP/DN” buttons on the microphone;
  B) Push the “FUNC” button: the display will show “F”;
  C) Keep pressing the “M1/EMG” button for 3 seconds: you will hear a “BIP” and the display will show “M1”.
  To memorize the other preset, repeat these steps and select another memory different from 1.
  To recall a channel previously stored, push the “FUNC” switch and the button of the desired memory.

These buttons have two functions; herebelow you will find their descriptions:

9. **“M1 - EMG” switch**
   This switch allows the storing of the first memory and the recalling of the 2 emergency channels. “M1 - EMG” selects sequentially channels 9 / 19 (emergency) and the one in use.
10. **“M2 - DW” button**
    “M2 - DW” stores the chosen channel in the M2 memory and activates the DUAL WATCH. This function allows the synthonization on two different channels at the same time:
    when a signal on the second channel is received, the conversation on the first one is automatically interrupted and the receiver switches on the second channel. The monitoring starts again 5 seconds after the signal end.
    To activate this function, operate as follows:
    - Select the desired channel through the channel selector or the “UP/DOWN” buttons on the microphone;
    - Keep the “DW” button pressed for about 3 seconds: you will hear a “BIP” and “DW” will flash on the display.
    - Select the second channel with the same procedure;
    - Press the button “DW” again for roughly 3 seconds: you will hear another “BIP”; the display will permanently show “DW” and will alternatively visualize the two selected channels.
11. **“M3 - SCAN” switch**
    The two functions of this button are: memorization of the third channel in the M3

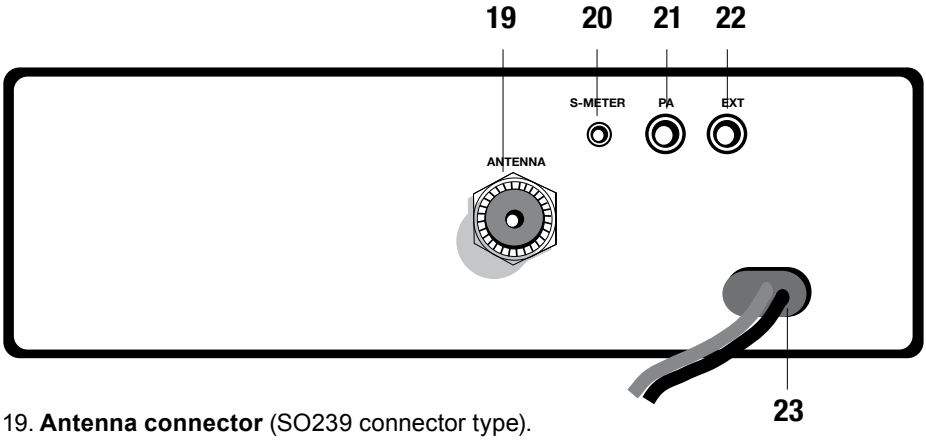
memory and “SCAN” function activation. In this case, you can automatically seek for a busy channel:

- turn the squelch clockwise until the background noise is no longer heard;
- press the “M3 - SCAN” button: “SCAN” will be shown on the display and the transceiver will automatically scan all the channels until a carrier is being received.

This function can be deactivated in three ways: pressing the PTT button, turning the channel selector or simply pushing any other button on the unit.

12. **“M4/LCR - AM/FM” button**
    Stores the memory number 4 and selects the operative mode (**AM/FM**). AM: green LED; FM: red LED. If you select a frequency band operating in FM modulation only, this button activates the **LCR** function (Last Channel Recall).
13. **“M5 - LOCK” switch**
    Pressing this button, you memorize the fifth (last) memory and activate the “LOCK” function (it allows the locking of the keyboard, channel selector and “UP/DN” buttons on the microphone, thus avoiding accidental use of the keys).
14. **N.K. button**
    Pressing this switch, you activate the reducing noise device (see introduction).
15. **“MIC” knob**
    The amplification of the voice in TX must be adjusted with this knob. The optimum level of the modulation must be found with the help of your receiving partner.
16. **“RF” knob**
    It controls the reception sensitivity.
    To increase sensitivity, simply turn it clockwise. Sensitivity decreases turning it counterclockwise.
17. **“VOL” knob**
    It allows the switching on of the unit and sets the volume to a comfortable audio level.
18. **“Squelch” knob**
    For the maximum receiver sensitivity, the control must be regulated exactly where the receiver background noise disappears.

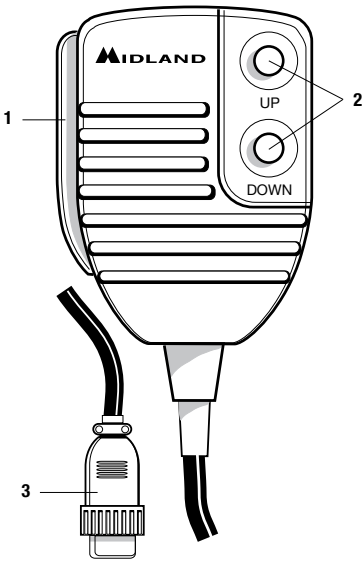
REAR PANEL



19. **Antenna connector** (SO239 connector type).
20. **S.Meter jack:** it allows an external “s meter” connection.
21. **“PA” jack:** by connecting with an external loudspeaker, you can use the unit as an audio-amplifier.
22. **”EXT” jack:** external loudspeaker jack (the internal loudspeaker is excluded).
23. **Power 13.2 Vdc:** power supply cable.

MICROPHONE

1. **PTT**: transmission button
2. **UP/DOWN buttons:** manual channels selector.
3. 6 pin microphone connector.



INSTALLATION

Safety and convenience are the primary consideration for mounting any piece of mobile equipment. All controls must be readily available to the operator without interfering with the movements necessary for safe operation of the vehicle. Set the proper position in the car to install the transceiver using the supplied supporting bracket or eventually the slide bracket. Tighten the retaining screws. The fixing bracket must be close to metallic parts.

POWER SUPPLY

Be sure the transceiver is off. In the direct-voltage power supply, to observe the polarity is very important, even if the unit is protected against the accidental inversion:
Red = positive pole (+)
Black = negative pole (-)
The same colors are present on the battery and in the fuse box of the car. Connect correctly the cable terminal to the battery.

ATTENTION
To obtain best performances we recommend to install the radio in a place with enough air circulation.

INSTALLING AN ANTENNA

1. Place the antenna as high as possible.
2. The longer is the antenna, the better will be the performance.
3. If possible, mount the antenna in the center of whatever surface you choose.
4. Keep the antenna cable away from noise sources, such as the ignition switch, gauges,etc.
5. Make sure you have a solid metal-to-metal ground connection.
6. Prevent cable damage during antenna installation.

WARNING. to avoid damage, never operate your CB radio without connecting a proper antenna. A periodical control of the SWR is recommended.

HOW TO OPERATE WITH YOUR ALAN 48 EXCEL MULTI

1. Screw the microphone plug into the microphone jack.
2. Make sure your antenna is securely connected to the antenna connector.
3. Make sure the SQUELCH control is turned fully conterclockwise.
4. Turn on the unit and adjust the volume control.
5. Select your desired channel through the “UP/DN” buttons on the microphone.
6. To transmit, press the PTT button and speak with a normal tone of voice.
7. To receive, release the PTT button.

FREQUENCY BAND SELECTION

The frequency bands must be chosen according to the country you are in.

Procedure:

1. Switch off the unit.
2. Turn it on while pushing the “**N.K**.” button.
3. Rotate the “**CHANNEL**” knob and select the desired frequency band (see the chart here below).
4. To fix your selection, press the “**LOCK**” button.

NOTE: If you select a frequency band which operates in FM mode only, the “AM/FM” control activates the LCR function (Last Channel Recall).

NOTE: In the UK frequency band, you can select directly the EC band by pushing the “LCR-A/F” control for about 2 seconds.

FREQUENCY BAND CHART

Displayed digits	Country
I	Italy 40 CH AM/FM 4Watt
I2	Italy 34 CH AM/FM 4Watt
D	Germany 80 CH FM 4Watt / 12 CH AM 1 Watt
D2	Germany 40 CH FM 4Watt / 12 CH AM 1 Watt
EU	Europe 40 CH FM 4Watt / 40 CH AM 1 Watt
EC	CEPT 40 CH FM 4Watt
E	Spain 40 CH AM/FM 4Watt
F	France 40 CH FM 4Watt / 40 CH AM 1 Watt
UK	England 40 CH FM 4Watt English frequencies + + EC 40 CH FM 4Watt CEPT frequencies

ATTENTION!
The frequency band allowed all over Europe is 40CH FM 4W (EC) – See the “Restrictions on the use” table.

SPECIFICATIONS

GENERAL

Channels ..... 40 FM (see the Frequency band chart)
Frequency Range .....25.615-30.105 MHz
Frequency Control .....PLL
Operating Temperature Range .....-10°/+55° C
DC input voltage .....13.2/24 Vdc ±15%
Size..... 150(L) x 45(H) x 175(D)mm
Weight 1Kg

RECEIVER

Receiving system .....Dual conversion superheterodyne
Intermediate frequency .....I°IF:10.695 MHz II°IF:455 KHz
Sensitivity .....0.5µV for 20dB SINAD in AM/FM
Audio output power @10% THD .....2.0 W @ 8 Ohm
Audio distortion .....Less than 8% @ 1KHz
Image rejection.....65dB
Adjacent channel rejection 65dB
Signal/Noise ratio 45dB
Current drain at stand/by..... 13.2V: 450mA
..... 24V: 520mA

TRANSMITTER

Output power.....duty cycle 10% 4W AM/FM @ 13.2 Vdc
Modulation..... FM:1.8KHz ± 0.2khz
..... AM: 85% to 95%
Frequency response.....400 Hz ÷ 3 KHz
Output impedance.....RF 50 Ohm unbalanced
Signal/Noise Ratio.....40 dB MIN
Current drain .....13.2V: 1300 mA (without modulation)
.....24V: 1600mA (without modulation)

All specifications are subject to change without notice.